

5.14.1 Filtering in the Frequency Domain.....	235
5.15 Efficiency of Frequency-Domain Filtering.....	239
5.16 Discrete-Time Filtering of Analog Signals	242
5.17 Digital Signal Processing Problems	244
5.18 Solutions to Exercises in Chapter 5.....	256
Chapter 6 Information Communication	261
6.1 Information Communication	261
6.2 Types of Communication Channels	262
6.3 Wireline Channels.....	263
6.4 Wireless Channels	269
6.5 Line-of-Sight Transmission	270
6.6 The Ionosphere and Communications	272
6.7 Communication with Satellites	272
6.8 Noise and Interference	273
6.9 Channel Models	274
6.10 Baseband Communication.....	276
6.11 Modulated Communication	277
6.12 Signal-to-Noise Ratio of an Amplitude-Modulated Signal	278
6.13 Digital Communication	281
6.14 Binary Phase Shift Keying.....	282
6.15 Frequency Shift Keying	285
6.16 Digital Communication Receivers.....	287
6.17 Digital Communication in the Presence of Noise.....	289
6.18 Digital Communication System Properties	291
6.19 Digital Channels.....	292
6.20 Entropy	293
6.21 Source Coding Theorem	295
6.22 Compression and the Huffman Code	297
6.23 Subtlies of Coding.....	299
6.24 Channel Coding	302
6.25 Repetition Codes	302
6.26 Block Channel Coding.....	304
6.27 Error-Correcting Codes: Hamming Distance.....	305
6.28 Error-Correcting Codes: Channel Decoding.....	308
6.29 Error-Correcting Codes: Hamming Codes	310
6.30 Noisy Channel Coding Theorem	313
6.30.1 Noisy Channel Coding Theorem	313
6.30.2 Converse to the Noisy Channel Coding Theorem	314
6.31 Capacity of a Channel	315
6.32 Comparison of Analog and Digital Communication.....	316
6.33 Communication Networks	317
6.34 Message Routing	319
6.35 Network architectures and interconnection	320
6.36 Ethernet.....	321
6.37 Communication Protocols.....	324
6.38 Information Communication Problems.....	325
6.39 Solutions to Exercises in Chapter 6.....	342